



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076

Purchase Requisition No. 1000009513 (SRM/RFX No. 6100000127)

Technical Specification for EDS and EBSD Detector

1) EDS detector (Energy Dispersive Spectroscopy)

LN2 free Silicon Drift Detector (SDD) system.

Peltier cooled silicon drift detector (SDD) with pulse processor.

Active detector area 30mm² or larger, energy resolution of 127eV or better at Mn K alpha.

Detection of elements down to Beryllium and quantification from Boron onwards.

Robust EDS detector window with Silicon nitride is preferred.

Throughput > 700kcps

Features to be available in the software/Hardware of the propose EDS system:

Spot, Line and Area acquisition plus analysis.

Multi-point Analysis.

Line-scan and Area Mapping.

Peak deconvolution.

Spectrum matching, drift correction, Smart quantification, dynamic element mapping, compositional maps,

EDS CPS mapping, Automatic processing of spectra, automatic enhancing of map.

Data management with interactive review and reporting of images, maps and spectra.

rebuild data/offline analysis of point scan, line scan, area scan/mapping.

Capable of simultaneous EDS + EBSD Scan.

Must be capable of incorporating EDS + EBSD information for automated Phase Identification.

2) EBSD detector (Electron Backscatter Diffraction Detector)

High speed data collection through low noise CMOS sensor, at rates of 3000 (or more) indexed points per second with 99% indexing success rate.

Simultaneous EDS + EBSD scan.

Forward scattered detector to be available.

Advanced imaging system for simultaneous collection from multi-positional electron detectors.

EBSB software should have features like:

Taylor and Schmidt factor calculations for the EBSD data (at different strain modes).

ODF plots with standard binning and Fourier Series.

Scalar texture plots for different micro-textural features.

Pattern averaging, for near neighbor patterns, and re-indexing must be possible.

Other Terms and Condition

Warrenty : 1 Year

Delivery Period : 30 Days